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SPACE LAUNCH SYSTEM
Human Spaceflight Knowledge Sharing Forum
2016
Johnny Heflin
SLS Program
Nov 2, 2016
SLS
SPACE LAUNCH SYSTEM
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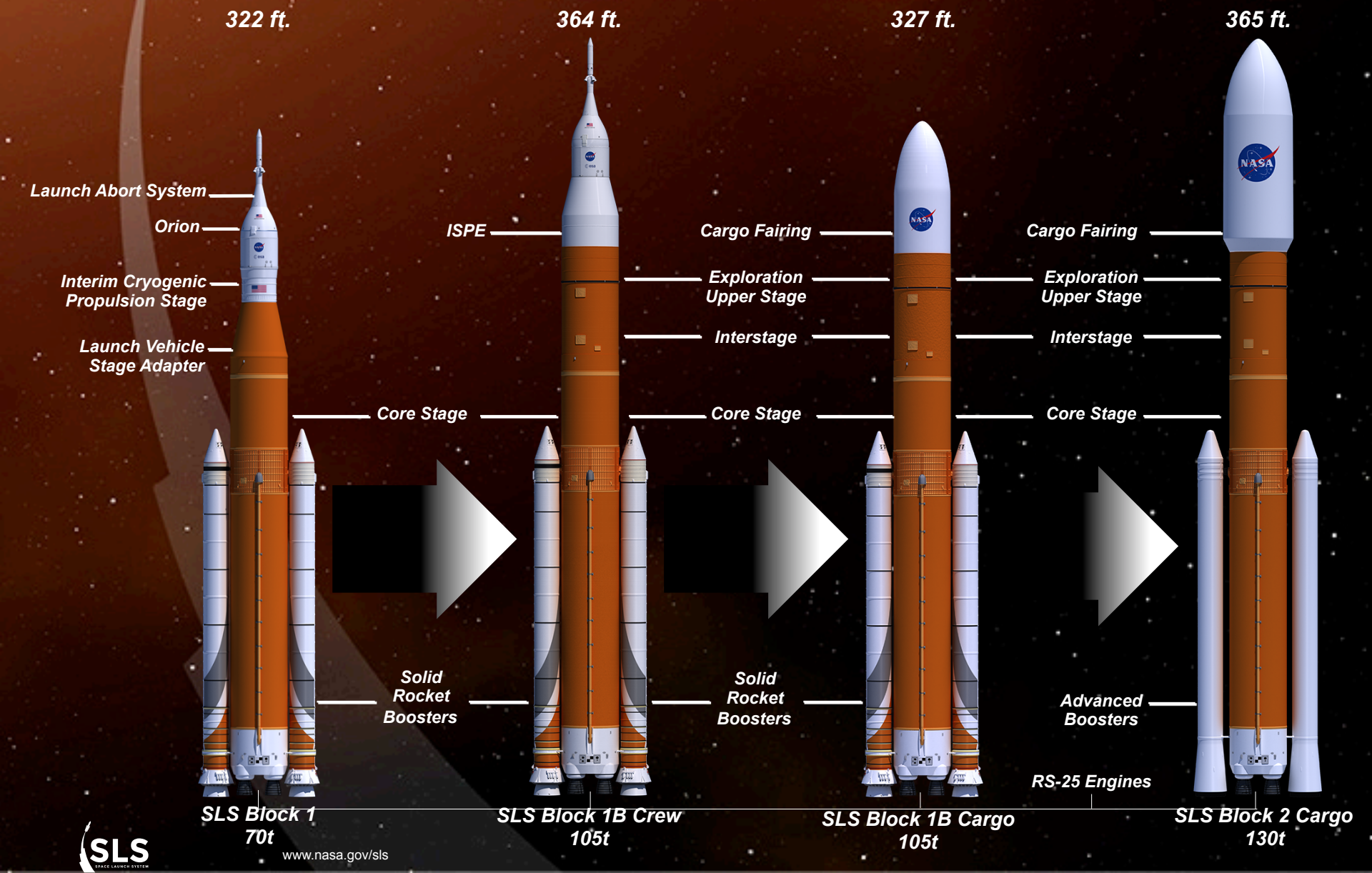
Evolution of NASA's Space Launch System



SLS SPACE LAUNCH SYSTEM

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SLS Program Organization At MSFC

September 2016

Hard line programmatic
Matrix relationship


Program Manager
John Honeycutt


Deputy Manager
Jerry Cook


Associate Program Manager
Keith Hefner


Assistant Prog. Manager
(*Detail*)
Tracy Johnson


Chief Engineer (CE)
Garry Lyles

Photo Unavailable

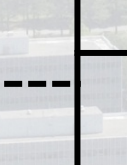
Deputy CE
John Hanson
(Acting)


Program Integration Manager
Sharon Cobb
(XP02)

Vacant

Assistant Manager

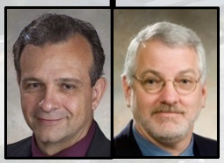

Chief Safety Officer (CSO)
Dan Mullane
(Acting)


Deputy CSO
Dan Mullane


Procurement Manager
Kellie Craig


Program Planning & Control Manager
Cheryl Harrell
(XP03)


Deputy Manager
Carl Ise


Boosters Manager
Alex Priskos
(XP10)

Deputy Manager
Bruce Tiller


Engines Manager
Steve Wofford
(XP20)

Deputy Manager
Johnny Heflin


Stages Manager
Steve Doering
(XP30)

Deputy Manager
Julie Bassler


Spacecraft/Payload Integration and Evolution Office
Jerry Cook
(Acting Manager)
(XP50)

Deputy Manager
Steve Creech


Ground Operations Liaison Manager
Brian Matisak
(XP60)

Assistant Manager
Andy Warren

SLS SE&I Management Structure

SLS Program Office Organization	Chief Engineer's Office	SLS SE&I Management Structure								S&MA
		Systems Engineering	Vehicle Management (EV40)	Structures and Environments (EV30)	Propulsion (ER01)	Production (EM01)	Integrated Avionics and Software (ES01)	Operations (EO01)	Test (ET01)	
SLS Program Manager SLS Program Deputy Mgr. Technical Assistant Procurement	Program Chief Engineer Program Deputy Chief Eng. Assistant Chief Engineer for Affordability Technical Mgr.	LSE:	DLE:	DLE:	DLE:	DLE:	DLE:	DLE:	DLE:	Program CSO:
Stages Element Manager Stages Deputy Element Mgr. Avionics Element Manager	Stages Chief Engineer Stages Deputy Chief Eng. Avionics Chief Engineer	ELSE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	Element CSO:
Booster Element Manager Booster Deputy Element Mgr. ◆ Control Systems Mgr. ◆ Assembly & Structures Systems Mgr. ◆ BSM Assembly System Mgr.	Booster Chief Engineer Booster Deputy Chief Eng.	ELSE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	Element CSO:
Engines Element Manager Engines Deputy Element Mgr.	Engines Chief Engineer Engines Deputy Chief Eng.	ELSE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	Element CSO:
Space Craft and Payload Integration Element Manager	Space Craft and Payload Integration Chief Engineer	ELSE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	EDLE:	Element CSO:

LSE: Lead Systems Engineer
DLE: Discipline Lead Engineer

SLS Progress

SOLID ROCKET BOOSTERS

OVERVIEW

- World's most powerful solid boosters for flight
- Two Space Shuttle-heritage solid rocket boosters
- Upgraded via fifth propellant segment to 3.6 million pounds of thrust capability, and with new avionics and insulation

STATUS

- Second Qualification Motor test completed in June 2016
- Flight hardware in inventory at Kennedy Space Center; processing underway at Orbital ATK in Utah

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CORE STAGE

OVERVIEW

- World's largest rocket stage
- 27.6-foot diameter; 200 feet tall
- Being built at Michoud Assembly Facility outside New Orleans, LA

STATUS

- Welding is underway currently on test and flight articles for core stage fuel tanks
- Refurbishment underway on B-2 stand at Stennis for Green Run core stage test

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RS-25 CORE STAGE ENGINES

OVERVIEW

- World's most powerful, efficient and reliable liquid rocket engine
- Four Space Shuttle-heritage RS-25s
- Upgraded with new controller; engines certified at 512,000 pounds of thrust each

STATUS

- Sixteen flight engines currently in inventory
- SLS RS-25 testing began at Stennis Space Center in early 2015; currently ongoing

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UPPER STAGE AND ADAPTERS

OVERVIEW

- Interim Cryogenic Propulsion Stage is derived from proven second stage of Delta IV Heavy
- Launch Vehicle Stage Adapter and Orion Stage Adapter mate ICPS to core stage and Orion, respectively

STATUS

- Orion Stage Adapter became first original SLS hardware to fly on Exploration Flight Test-1 in December 2014
- Flight in manufacture currently; test articles will begin stacking for loads testing in late 2016

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